OIPE

ENTERED

```
   3 <110> APPLICANT: Cell Signaling Technology, Inc.
   4       COMB, Michael J.
   5       ZHANG, Hui
   6       TAN, Yi
   8 <120> TITLE OF INVENTION: PRODUCTION OF MOTIF-SPECIFIC AND CONTEXT-INDEPENDENT
ANTIBODIES USING
   9       PEPTIDE LIBRARIES AS ANTIGENS
  11 <130> FILE REFERENCE: CST-138 CIP2
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/014,485A
C--> 13 <141> CURRENT FILING DATE: 2002-03-18
  13 <150> PRIOR APPLICATION NUMBER: US 09/148,712
  14 <151> PRIOR FILING DATE: 1998-09-04
  16 <150> PRIOR APPLICATION NUMBER: US 09/535,364
  17 <151> PRIOR FILING DATE: 2000-03-24
  19 <160> NUMBER OF SEQ ID NOS: 145
  21 <170> SOFTWARE: PatentIn version 3.1
  23 <210> SEQ ID NO: 1
  24 <211> LENGTH: 14
  25 <212> TYPE: PRT
  26 <213> ORGANISM: Homo sapiens
  28 <220> FEATURE:
  29 <221> NAME/KEY: MOD_RES
  30 <222> LOCATION: (9)..(9)
  31 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 9 is phosphorylated
  34 <400> SEQUENCE: 1
  36 Ile Lys Asp Gly Ala Thr Met Lys Thr Phe Cys Gly Thr Pro
  37 1               5                   10
  40 <210> SEQ ID NO: 2
  41 <211> LENGTH: 14
  42 <212> TYPE: PRT
  43 <213> ORGANISM: Homo sapiens
  45 <220> FEATURE:
  46 <221> NAME/KEY: MOD_RES
  47 <222> LOCATION: (5)..(5)
  48 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 5 is phosphorylated
  51 <400> SEQUENCE: 2
  53 Asp Ala Ala Val Thr Pro Lys Lys Arg His Leu Ser Lys Cys
  54 1               5                   10
  57 <210> SEQ ID NO: 3
  58 <211> LENGTH: 15
  59 <212> TYPE: PRT
  60 <213> ORGANISM: Homo sapiens
  62 <220> FEATURE:
  63 <221> NAME/KEY: MOD_RES
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RAW SEQUENCE LISTING   DATE: 04/03/2002
PATENT APPLICATION: US/10/014,485A TIME: 10:25:43

Input Set : A:\EP.txt
Output Set: N:\CRF3\04032002\J014485A.raw

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64 <222> LOCATION: (8)..(8)
65 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 8 is phosphorylated
68 <400> SEQUENCE: 3
70 Asp Thr Gln Ile Lys Arg Asn Thr Phe Val Gly Thr Pro Phe Cys
71 1               5                   10                  15
74 <210> SEQ ID NO: 4
75 <211> LENGTH: 10
76 <212> TYPE: PRT
77 <213> ORGANISM: Homo sapiens
79 <220> FEATURE:
80 <221> NAME/KEY: MOD_RES
81 <222> LOCATION: (5)..(5)
82 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 5 is phosphorylated
85 <400> SEQUENCE: 4
87 His Gln Val Val Thr Arg Trp Tyr Arg Cys
88 1               5                   10
91 <210> SEQ ID NO: 5
92 <211> LENGTH: 10
93 <212> TYPE: PRT
94 <213> ORGANISM: Homo sapiens
96 <220> FEATURE:
97 <221> NAME/KEY: MOD_RES
98 <222> LOCATION: (7)..(7)
99 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 7 is phosphorylated
102 <400> SEQUENCE: 5
104 His Gln Val Leu Met Lys Thr Val Cys Gly
105 1               5                   10
108 <210> SEQ ID NO: 6
109 <211> LENGTH: 14
110 <212> TYPE: PRT
111 <213> ORGANISM: Homo sapiens
113 <220> FEATURE:
114 <221> NAME/KEY: MOD_RES
115 <222> LOCATION: (7)..(7)
116 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 7 is phosphorylated
119 <400> SEQUENCE: 6
121 Ile Pro Ile Arg Val Tyr Thr His Glu Val Val Thr Leu Cys
122 1               5                   10
125 <210> SEQ ID NO: 7
126 <211> LENGTH: 15
127 <212> TYPE: PRT
128 <213> ORGANISM: Homo sapiens
130 <220> FEATURE:
131 <221> NAME/KEY: MOD_RES
132 <222> LOCATION: (8)..(8)
133 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 8 is phosphorylated
136 <400> SEQUENCE: 7
138 Gly Val Pro Val Arg Thr Tyr Thr His Glu Val Val Thr Leu Cys
139 1               5                   10                  15
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RAW SEQUENCE LISTING   DATE: 04/03/2002
PATENT APPLICATION: US/10/014,485A   TIME: 10:25:43

Input Set : A:\EP.txt
Output Set: N:\CRF3\04032002\J014485A.raw

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145 <213> ORGANISM: Homo sapiens
147 <220> FEATURE:
148 <221> NAME/KEY: MOD_RES
149 <222> LOCATION: (8)..(8)
150 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 8 is phosphorylated
153 <400> SEQUENCE: 8
155 Asn Gln Val Phe Leu Gly Phe Thr Tyr Val Ala Pro Lys Lys Cys
156 1               5                   10                  15
159 <210> SEQ ID NO: 9
160 <211> LENGTH: 14
161 <212> TYPE: PRT
162 <213> ORGANISM: Homo sapiens
164 <220> FEATURE:
165 <221> NAME/KEY: MOD_RES
166 <222> LOCATION: (12)..(12)
167 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 12 is phosphorylated
170 <400> SEQUENCE: 9
172 Lys Glu His Met Met Asp Gly Val Thr Thr Arg Thr Phe Cys
173 1               5                   10
176 <210> SEQ ID NO: 10
177 <211> LENGTH: 15
178 <212> TYPE: PRT
179 <213> ORGANISM: Homo sapiens
181 <220> FEATURE:
182 <221> NAME/KEY: MOD_RES
183 <222> LOCATION: (7)..(7)
184 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 7 is phosphorylated
187 <220> FEATURE:
188 <221> NAME/KEY: MOD_RES
189 <222> LOCATION: (9)..(9)
190 <223> OTHER INFORMATION: PHOSPHORYLATION; tyrosine at position 9 is phosphorylated
193 <400> SEQUENCE: 10
195 Asp His Thr Gly Phe Leu Thr Glu Tyr Val Ala Thr Arg Trp Cys
196 1               5                   10                  15
199 <210> SEQ ID NO: 11
200 <211> LENGTH: 15
201 <212> TYPE: PRT
202 <213> ORGANISM: Homo sapiens
204 <220> FEATURE:
205 <221> NAME/KEY: MOD_RES
206 <222> LOCATION: (5)..(5)
207 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 5 is phosphorylated
210 <220> FEATURE:
211 <221> NAME/KEY: MOD_RES
212 <222> LOCATION: (9)..(9)
213 <223> OTHER INFORMATION: PHOSPHORYLATION; serine at position 9 is phosphorylated
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/014,485A

DATE: 04/03/2002
TIME: 10:25:43

Input Set : A:\EP.txt
Output Set: N:\CRF3\04032002\J014485A.raw

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216 <400> SEQUENCE: 11
218 Glu Leu Leu Pro Thr Pro Pro Leu Ser Pro Ser Arg Arg Ser Cys
219 1               5                 10                15
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223 <211> LENGTH: 17
224 <212> TYPE: PRT
225 <213> ORGANISM: Homo sapiens
227 <220> FEATURE:
228 <221> NAME/KEY: MOD_RES
229 <222> LOCATION: (10)..(10)
230 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 10 is phosphorylated
233 <220> FEATURE:
234 <221> NAME/KEY: MOD_RES
235 <222> LOCATION: (12)..(12)
236 <223> OTHER INFORMATION: PHOSPHORYLATION; tyrosine at position 12 is phosphorylated
239 <400> SEQUENCE: 12
241 Leu Ala Arg His Thr Asp Asp Glu Met Thr Gly Tyr Val Ala Thr Arg
242 1               5                 10                15
245 Cys
249 <210> SEQ ID NO: 13
250 <211> LENGTH: 15
251 <212> TYPE: PRT
252 <213> ORGANISM: Homo sapiens
254 <220> FEATURE:
255 <221> NAME/KEY: MOD_RES
256 <222> LOCATION: (5)..(5)
257 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 5 is phosphorylated
260 <220> FEATURE:
261 <221> NAME/KEY: MOD_RES
262 <222> LOCATION: (7)..(7)
263 <223> OTHER INFORMATION: PHOSPHORYLATION; tyrosine at position 7 is phosphorylated
266 <400> SEQUENCE: 13
268 Ser Phe Met Met Thr Pro Tyr Val Val Thr Arg Tyr Tyr Arg Cys
269 1               5                 10                15
272 <210> SEQ ID NO: 14
273 <211> LENGTH: 14
274 <212> TYPE: PRT
275 <213> ORGANISM: Homo sapiens
277 <220> FEATURE:
278 <221> NAME/KEY: MISC_FEATURE
279 <222> LOCATION: (8)..(8)
280 <223> OTHER INFORMATION: Xaa at position 8 is phosphoserine or phosphothreonine
283 <220> FEATURE:
284 <221> NAME/KEY: MISC_FEATURE
285 <222> LOCATION: (11)..(11)
286 <223> OTHER INFORMATION: Xaa at position 11 is arginine or lysine
289 <220> FEATURE:
290 <221> NAME/KEY: MISC_FEATURE
291 <222> LOCATION: (1)..(14)
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                    RAW SEQUENCE LISTING               DATE: 04/03/2002
                    PATENT APPLICATION:  US/10/014,485A    TIME: 10:25:43

                    Input Set : A:\EP.txt
                    Output Set: N:\CRF3\04032002\J014485A.raw


     292 <223> OTHER INFORMATION: Xaa at positions 1-5, 7, 10, and 12-14 = any one of the 20
amino
     293      acids except cysteine
     296 <400> SEQUENCE: 14
W--> 298 Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa
     299 1                   5                   10
     302 <210> SEQ ID NO: 15
     303 <211> LENGTH: 14
     304 <212> TYPE: PRT
     305 <213> ORGANISM: Homo sapiens
     307 <220> FEATURE:
     308 <221> NAME/KEY: MOD_RES
     309 <222> LOCATION: (8)..(8)
     310 <223> OTHER INFORMATION: PHOSPHORYLATION; serine at position 8 is phosphorylated
     313 <220> FEATURE:
     314 <221> NAME/KEY: MISC_FEATURE
     315 <222> LOCATION: (1)..(14)
     316 <223> OTHER INFORMATION: Xaa at positions 1-4, 7, 9, and 11-14 = any one of the 20
amino a
     317      cids except cysteine
     320 <400> SEQUENCE: 15
W--> 322 Xaa Xaa Xaa Xaa Arg Ser Xaa Ser Xaa Pro Xaa Xaa Xaa Xaa
     323 1                   5                   10
     326 <210> SEQ ID NO: 16
     327 <211> LENGTH: 14
     328 <212> TYPE: PRT
     329 <213> ORGANISM: Homo sapiens
     331 <220> FEATURE:
     332 <221> NAME/KEY: MISC_FEATURE
     333 <222> LOCATION: (1)..(14)
     334 <223> OTHER INFORMATION: Xaa at positions 1-4, 7, 9, and 11-14 = any one of the 20
amino a
     335      cids except cysteine
     338 <400> SEQUENCE: 16
W--> 340 Xaa Xaa Xaa Xaa Arg Ser Xaa Ser Xaa Pro Xaa Xaa Xaa Xaa
     341 1                   5                   10
     344 <210> SEQ ID NO: 17
     345 <211> LENGTH: 14
     346 <212> TYPE: PRT
     347 <213> ORGANISM: Homo sapiens
     349 <220> FEATURE:
     350 <221> NAME/KEY: MISC_FEATURE
     351 <222> LOCATION: (8)..(8)
     352 <223> OTHER INFORMATION: Xaa at position 8 is phosphoserine or phosphothreonine
     355 <220> FEATURE:
     356 <221> NAME/KEY: MISC_FEATURE
     357 <222> LOCATION: (1)..(14)
     358 <223> OTHER INFORMATION: Xaa at positions 1-5, 7, and 10-14 = any one of the 20 amino
acid
     359      s except cysteine
     362 <400> SEQUENCE: 17
W--> 364 Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa
     365 1                   5                   10
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Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY   DATE: 04/03/2002
PATENT APPLICATION: US/10/014,485A   TIME: 10:25:45

Input Set : **A:\EP.txt**
Output Set: **N:\CRF3\04032002\J014485A.raw**

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L:13 M:270 C: Current Application Number differs, Replaced Current Application No
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:298 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:322 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:340 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:364 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:388 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:418 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
L:448 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:478 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:508 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22
L:538 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:568 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
L:598 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25
L:622 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:646 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:670 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:700 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:775 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33
L:793 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34
L:901 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41
L:931 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42
L:983 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45
L:1007 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46
L:1037 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47
L:1750 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:88
L:1775 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89
L:1799 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90
L:1823 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:91
L:1847 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:92
L:1871 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:93
L:1894 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:94
L:1917 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:95
L:1959 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:96
L:1963 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:96
L:1986 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:97
L:2012 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:98
L:2035 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:99
L:2061 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:100
L:2094 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101
L:2117 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:102
L:2142 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103
L:2165 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:104
L:2205 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:105
L:2228 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106
L:2253 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:107
L:2276 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:108
L:2309 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109
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VERIFICATION SUMMARY   DATE: 04/03/2002
PATENT APPLICATION: US/10/014,485A   TIME: 10:25:45

Input Set : **A:\EP.txt**
Output Set: **N:\CRF3\04032002\J014485A.raw**

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L:2338 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:110
L:2377 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111
L:2381 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111
L:2404 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:112
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